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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/484,691
Filing Date: January 18, 2000
Appellant(s): EBRAHIMI ET AL.

MAILED

APR 12 2007

Technology Center 2100

Joseph P. Mehrle
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 10, 2006 appealing from the Office action mailed November 11, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,401,125	MAKARIOS ET AL	6-2002
6,003,084	GREEN ET AL	12-1999
US 2002/0007317	CALLAGHAN ET AL	1-2002
5,805,803	BIRRELL ET AL	9-1998

6,728,884

LIM

4-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 7-8, 9-17, and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,401,125 to **Makarios et al** in view of US Patent 6,003,084 to **Green et al**.

As per claim 1, Makarios et al substantially teaches a method for brokering state information exchanged between computers using at least one protocol above a transport layer, the method comprising the steps of: *receiving at a proxy a request from a client requesting a resource of an origin server wherein the transparent proxy is unknown to the client* (see column 4, lines 37 and column 4, lines 53-56) as interpreted by the Examiner, the proxy disclosed by **Makarios et al** meets the recitation of transparent proxy because the proxy is unknown to the client when the client sends the first request, the client sends the URL directly to a web server for HTTP objects (resource). **Makarios et al** discloses *redirecting the client request from the transparent proxy to a signup web page that meets the recitation of policy module* (column 4, lines 51-53 and column 5, lines 10-15); *obtaining at the transparent proxy policy enforcement data wherein the policy enforcement data is received from the policy module* (column 5, lines 15-27 and column 3, lines 1-10); a proxy cookie is generated in response to login information of the user and transmitting to the user to use as an authentication for further interactions with the proxy that meets the recitation of *generating at the proxy a policy state token in response to the policy enforcement data* (column 5, lines 10-24); *and transmitting the policy state token from the transparent proxy to the client wherein the policy state token is used as an authentication of the*

client to the transparent proxy for subsequent interactions between the client and the transparent proxy (see column 5, lines 30-51). Although **Makarios et al** discloses the claimed method steps of claim 1, **Makarios et al** does not provide enough details on the architecture implemented in the invention regarding the policy module; it is interpreted by the Examiner that the policy module is a program running on the web proxy server, for example, the signup web page is part of the system (see column 5, lines 10-17 and column 2, lines 15-35). **Green et al** in an analogous art teaches a memory configured at least in part by a transparent proxy process, a processor for running the transparent proxy process, (see figure 1) at least one link for networked communication between the transparent proxy process, on the one hand, and a client computer and an origin server, on the other hand, for example (see figures 2 and 3); **Green et al** further teaches a secure transparent proxy that is transparent to both a client and a server (column 9, lines 5-12) and transmitting packets in accordance with a defined security policy (column 5, lines 25-30) having a security module to verify whether to grant or deny access to proxy services (column 7, line 48 through column 8, line 25 and column 9, line 12-67). **Green et al** discloses a transparent proxy comprising a connection manager and a security manager that meets the recitation of policy module residing within the same environment with the transparent proxy (see figure 3b and column 5, lines 34-40). In one embodiment, the proxy comprises a connection manager and a security manager that meets the recitation of policy module residing within the same environment with the transparent proxy (see figure 3b and column 5, lines 34-40), the proxy incorporates features of both application gateways and proxies to better serve client or the server depending on which side caused the firewall action to be triggered; and further discloses several advantages of the invention associated with the transparent proxy (column 5, lines 55

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through column 6, line 20). **Green et al** discloses wherein policy enforcement data is received from the policy module because as the client transfers data request to the proxy, requesting information from a server, the proxy comprises modules and components wherein a connection manager operates with a security monitor which monitors the data from the client for conformance with predefined conditions and provides control information to the connection manager of the proxy which in turns controls the relay and directs it whether to establish connections to the server (see column 8, lines 14-25). In another embodiment, the proxy uses a filter component that also meets the recitation of policy module, and the filter component processes the policy enforcement data and returns status to the communication component of the proxy, based on the status, the proxy communicates accordingly to the server (see column 10, lines 28-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of **Makarios et al** to implement some of the features of the inventive concept of **Green et al**, which provides a transparent proxy comprising security modules with more security and more versatility as taught by **Green et al**. One skilled in the art would have been motivated to do so because the transparent proxy disclosed by **Green et al** is transparent to both the client and the server, incorporating features of both application gateways and proxies, easy to configure, (see column 5, line 55 through column 6, line 20), it also provides more security and more versatility where additional filtering may be performed as desired, and it is associated with policy module that allows the proxy to use any defined protocols in accordance to defined security policy and provides transparency wherein no devices need to change any configuration information (column 9, lines 11-60).

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(10) Response to Argument

Appellant's statements on the grounds of rejection are not correct. The issues raised by Appellant were fully responded under the grounds of rejection. Appellant argues that Makarios teaches away from a transparent proxy. Examiner's interpretation of a transparent proxy is correctly, reasonably, and broadly interpreted in light of Applicant's specification. For instance, Applicant's specification page 8, lines 19 - page 9, line 2 cites,

"A given transparent proxy B will not necessarily recognize client A which is making the request, if earlier requests from client A were serviced by a different proxy or if this is the first request to the origin web server X. In order for the current proxy B to establish, retrieve, and maintain state, the invention uses state tokens in the form of transparent proxy cookies. First, B examines the HTTP request that it receives from client A for an object R on the origin server X, and determines that the request does not contain a proxy cookie meeting the intranet policy requirements."

As noted above, a transparent proxy will not necessarily recognize client A if this is the first request to the origin web server X. A transparent proxy receives request from client A for an object on the origin server X and determines if the request contains a proxy cookie conforming to a policy requirement.

Makarios et al reference column 4, lines 31-37 and lines 53-59 cites,

"As shown in FIG. 3, in Step 100 the system (preferably a computer program running on the proxy 20 or something similar) monitors requests generated by the browser client 10 for HTTP objects. When the browser client 10 generates such a request, it is intercepted and in Step 110 the system checks it to see if it contains a proxy cookie 50', i.e., a cookie conforming to a special format such as
perucookie=<userID>,"

"Assume, for example, in Step 100 the browser client initially requests an HTTP object such as a web page as follows:

GET http://www.bungalow.com

Seeing no proxy cookie 50' in Step 110, in Step 120 the proxy 20 would redirect the browser client 10, causing it in Step 130 to generate the subsequent information request".

Therefore, Examiner's interpretation is correct. Makarios et al meets the claimed limitation as claimed. The proxy is transparent to the client because the proxy intercepts HTTP request destined for an Internet server and determines if the request contains a proxy cookie conformed to a special format (policy requirement). The proxy is unknown to the client when making the first request: "GET http://www.bungalow.com" and no proxy cookie is present. In addition, interaction between the client and the proxy is performed above without the client initially configured or registered with the proxy contrarily to appellant's argument (see appellant's brief page 11, lines 1-4).

Applicant further argues that the client of Makarios must not only be aware of the proxy but must register with the proxy and because a user of the client must provide a username the proxy of Makarios is not transparent. Examiner respectfully disagrees. First as explained clearly above, the client of Makarios et al was not aware of the proxy, therefore the proxy must be transparent. Second, in response to Appellant's argument that in Makarios "the user of the client must provide a handle or username before interaction with that proxy can commence see Makarios col. 5, lines 10-17," it is noted that (steps 140-150) cited herein by Appellant are not executed before interaction with the proxy can commence, there was already interaction with the proxy in steps 110-130 as it will be shown below. (See also Makarios et al, claim 1).

Appellant's argument regarding the client of Makarios is redirecting to a signup web page to provide a user ID for identification (see Makarios figure 4) for showing that the proxy is not transparent, is contradictory to the specification and the claimed invention because the claimed invention requires the same: a step of "redirecting the client request from the transparent proxy

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to a policy module” and a step of “obtaining at the transparent proxy policy enforcement data (login information), wherein the policy module and the transparent proxy reside within a same environment.” Applicant’s specification page 9, lines 1-13 describes, (note B is the transparent proxy and A is the client),

“First, B examines the HTTP request that it receives from client A for an object R on the origin server X, and determines that the request does not contain a proxy cookie meeting the intranet policy requirements.”

“B therefore formats an A-B-I state token appended to or otherwise embedded in the redirection target address, and **redirects A to an identity broker I** along with relevant request data appended to the identifier or otherwise attached to the HTTP redirect command. That is, B uses the conventional HTTP redirect facility to redirect the request to a possibly novel target, and B may use familiar techniques to append or embed data into an URL or URI to place novel proxy cookie data in the command with the target address. Identity broker I extracts or otherwise separates the A-B-I state token from the address or request header, verifies B’s credentials, and uses the HTTP redirect facility to **redirect A to a login service L that can validate A’s identity** and give it authorization to use the network. The login server L redirects A’s request back to the identity broker I after A successfully logs in (note that proxy B, identity broker I, and login service L can all be running on the same machine).

That is in Applicant’s specification, the client is redirected to a login service residing at the transparent proxy and user validation is performed at the transparent proxy.

Makarios et al, column 4, lines 49-67 cites redirecting the client request as claimed and further discloses redirecting the client request when no proxy cookie is present:

“If, on the other hand, Step 110 determines that no proxy cookie 50' was included with the information request from the browser client 10, in Step 120 the proxy 20 will cause the browser client 10 to redirect to a new web page in a manner known in the art. Assume, for example, in Step 100 the browser client initially requests an HTTP object such as a web page as follows:

GET http://www.bungalow.com

Seeing no proxy cookie 50' in Step 110, in Step 120 the proxy 20 would redirect the browser client 10, causing it in Step 130 to generate the subsequent information request

GET http://peru.host/ ?peru-command=peru-fetch-peru-cookie&peru-url=http%3A%2F%2Fwww.bungalow.com%2F

where peru.host is a syntactically valid (albeit fictitious) URL and peru-command=perufetch-peru-cookie and peru-url=http%3A%2F%2Fwww.bungalow.com%2F are fields which the proxy 20 has directed the browser client 10 to include in the request.”

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Makarios et al further discloses determining and asking the user for login information after a second request, (a redirection request); not before interaction with the proxy can commence, as argued by Appellant:

Having received the product of the redirection from the browser client 10 in Step 130, in Step 140 the system examines the redirected request to see if the browser client 10 has also included a cookie for peru.host, i.e., perucookie=<userID>;. If Step 140 determines that the latter is the case, i.e., this is the first time for the user to access the proxy 20 from this browser client 10, in Step 150 the system serves the browser client 10 a signup web page or form as prompting him or her to provide a handle or nickname for identification in subsequent transactions, as shown in FIG. 4. Simultaneously, in Step 150 the system directs the browser client 10 to store a proxy cookie 50' which appears to come from the peru. host domain.

When the user types in a name and submits the form, the name is returned to the proxy 20 (along with the proxy cookie 50', since it now matches the peru.host domain). Then, in Step 160, proxy 20 stores the name for this user, associated with the proxy cookie 50', for use in future customization operations. (see column 5, lines 1-5 and 10-25)

On page 13, lines 7-9 appellant argues that "Makarios is heavily reliant on a forward proxy arrangement and requires direct client registration and configuration to establish the initial cookie for a user on the client that the client then actively attaches to requests and forwards to the proxy". For the sake of argument, it is noted that Appellants's specification discloses the same for instance, on page 10, lines 2-5, after client A provides identification information and is being validated:

"B responds with a another redirection, for exactly the same resource, and this redirection contains the valid A-B-X state token in its header as a proxy cookie. It is important to note that because B is a proxy, it can send cookies that A will use when requesting resources from X. A then re-requests the resource from X, this time with the proxy cookie required by B contained in the request header."

As explained in the Response to Argument above, Makarios et al discloses a transparent proxy, therefore, Appellant's arguments that Makarios et al cannot be combined to Green because Makarios does not disclose a transparent proxy is not correct. The claims have been

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combined in the Final rejection dated 11/3/2005 not because the proxy of Makarios et al is not transparent but to clearly disclose the functions of the policy module and more specifically to clearly disclose the additional features of claim 14 with respect to the architecture of a transparent proxy server that includes a policy module.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Carl Colin
March 29, 2007

Conferees:

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